Sanitation Finance

Access to Capital for Entrepreneurs and End-Users

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Executive Summary

Recent development trends have placed increased emphasis on engaging the private sector in deploying products and services to help lift the poor out of poverty. Improved sanitation, traditionally a government concern, might in some cases be better addressed via small and medium enterprises that can respond to varying consumer needs and regional differences. However, entrepreneurs in this sector face a number of challenges, most notably access to financial markets. End-users also often require credit when purchasing improved sanitation products and services.

Numerous stakeholders are involved in financing market-based sanitation solutions. Government can provide incentives and regulation that favor or hinder private markets. Highly risk averse traditional banks and commercial capital markets will likely not be interested in small-scale projects with limited returns, and are known to shy away from even larger-scale development projects due to high perceived risk; education and pilot project demonstrations may help to convince these entities to engage in financing sanitation companies projects. NGOs, social investors and development banks may be more willing to provide capital with varying degrees of risk tolerance and return expectations; in lieu of outsized financial returns, these entities will likely expect commensurate social and/or environmental returns.

Microfinance to households and microenterprises will be essential to any successful improved sanitation project. Small loans can provide the needed capital for end-users and entrepreneurs to engage in private markets where otherwise they would be left out. Non-profit microfinance institutions and development banks often employ the Self-Help Group method wherein community members with similar socioeconomic backgrounds form groups to begin saving money in pooled accounts from which they can begin to loan to each other. Group members can educate each other on financial literacy, work opportunities, and, in this case, relevant sanitation products and services. Social pressure within the group also generally ensures surprisingly high loan payback rates.

For the “missing middle”, larger enterprises that are too big for microfinance and too small, innovative or inexperienced for traditional finance, NGOs have successfully stepped in to provide enterprise development services coupled with loans and equity investments. They generally fund two categories of entrepreneurs: incubation-level companies with innovative ideas boasting huge potential and more experienced firms looking to scale their operations. NGOs have proven more flexible than traditional financiers in this regard as they are able to work more closely with these companies to ensure their success coupled with commensurate social and environmental benefits that fulfill NGO mission goals.

Compiling data on “triple bottom line” returns (financial, social and environmental) is essential when working with social investors, but tracking these impacts can be challenging. The Global Impact Investing Network, in coordination with several NGOs and government agencies, has developed the Impact Reporting and Investment Standards, a set of metrics for doing so. This allows for comparison of impacts between projects and organizations. It is important in

compiling this data to ensure the entrepreneur understands why it is being collected and how to do so. The NGO should also ensure reporting accuracy with local staff, and may even employ additional Monitoring and Evaluation staff to ensure project success and goal attainment.

A few potential pitfalls to consider when developing a financing model include:

- Lending culture and legal issues: Do people generally pay back loans on time and in full? How difficult is it to collect on collateral if need be?
- Market distortion: Are your loan terms or other mechanisms distorting already established markets? Are rates adequate to ensure the NGO is covering all costs when inflation is factored in?
- Cultural issues around paying for public goods: Are people willing to pay for services they might deem basic human rights? Will they be willing to take out loans for such services?

When considering developing a financing model for sanitation entrepreneurs and end-users, it is important to keep in mind that it is not necessary to reinvent the wheel. NGOs, development banks and other agencies have done similar work in this and other industries. It is important to understand the various stakeholders involved in a given project and what opportunities there are for engaging with each. Partnerships with organizations offering complimentary skills and experience can also go a long way toward ensuring project success. Pilot projects can be helpful in providing results to potential investors. Finally, the potential for scale must be considered when considering a financing project to maximize impacts, reduce loan risk and create potential for future investments.

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Stakeholders

Before delving into financing methods for improved sanitation, it is important to understand the stakeholders involved. The chart below outlines each stakeholder's role in deploying sanitation projects, their strengths and weaknesses, and how they will participate in deploying proper financing mechanisms to support these projects.

Stakeholder Analysis

Stakeholder	*Role*	*Strengths*	*Weaknesses*	*Opportunities*
Government	Deploy large-scale infrastructure, collect levies, regulate the industry, impose demand-side regs, track Millennium Dev. Goals (MDGs), oversee NGOs, provide subsidies	Large-scale deployment, ability to shape industry focus through incentives	Often cannot address needs of poorest populations, limited capital, bureaucracy, lack of support for informal sector	NGOs can help gov't meet MDGs by recognizing informal sector and creating incentives and support for sanitation entrepreneurs. Also, help users access gov't subsidies.
Multinational Corporations	Large-scale projects, government consulting, tech innovations	Serving large numbers of people with advanced technology	One-size-fits-all solutions that do not address needs of urban poor and rural populations, profit trumps user satisfaction	Logistical training, charitable support, product innovations, employee involvement through CSR programs
Traditional Investors	First point of access for traditional business loans and equity investments	Huge capital resources, strong formalized due diligence process, conservative and highly risk-averse, finances established companies and larger-scale projects	Wary of new business models, focus solely on financial returns, won't lend to informal sector, won't lend small amounts, located away of poor neighborhoods	Banks would benefit from education on how sanitation projects can be profitable, NGO partners can help deploy pilot programs to prove potential for sanitation businesses
NGOs	Address the needs of underserved populations, support SMEs, work with the informal sector	High risk tolerance, nimble, neutral 3rd party that can bring multiple stakeholders together, can provide education and other services that do not generate direct revenue, hands-on approach	Traditional focus on charity-based models can limit potential for scale, short-term focus, limited experience with private sector and with innovative funding/financing options	Private sector support through training and finance, creating markets, facilitating innovation, creating investment opportunities for impact investors
Social Investors	Provide access to capital for NGOs, entrepreneurs and end-users	Support private sector solutions to social & environmental issues, create financing opportunities where they did not previously exist, reduced financial return requirements compared to traditional financiers, "slow money", higher risk tolerance than traditional investors	May distort existing markets, sometimes arduous impact reporting requirements, disengagement from on-the-ground project deployment, still burgeoning investment class, limited experience in sanitation	Huge opportunity to create capital markets affordable to NGOs, SMEs and end-users; focus on balancing financial and social/environmental returns
Microfinance Institutions & Development Banks	Provide credit and savings accounts for those otherwise without access, support specific development initiatives with tailored financing facilities	Work with underserved populations, use community-directed lending to improve pay-back rates, willing to lend small amounts, more risk tolerant than traditional banks, understand needs of the poor	For-profit MFIs may charge excessive rates, some users may take on too much debt, must educate users, due diligence cost relatively high versus larger loans	Important component of many successful development projects involving end-user investment, NGO partnerships
Entrepreneurs	Create demand-driven solutions to addressing end-user needs for even the poorest populations. May be an informal one-man operation, a small business with a few staff, or a larger-scale operation with more resources	Serve markets the government and large companies ignore, provide customized solutions, provide access and choice	Limited business skills, often no access to capital, may lack government support, low profit margins, limited awareness of product/service innovations, no "bankable proposal"	With proper support, entrepreneurs may hold the key to addressing the sanitation needs of previously underserved populations
End-Users	Many users, particularly the poorest have limited access to resources and suffer health and social consequences due to poor sanitation methods	Many may have more ability to pay (with proper financing) than traditionally assumed, accustomed to ad hoc solutions, new awareness of outside world may increase education & product/service demand	Lack of education, limited capital and access to financing, varying needs, mistrust of various players, complicated relationship with sanitation entrepreneurs	With proper education, marketing and product/service selection, end-users may embrace private sector solutions on a broad scale
Self-Help Groups	Local people, usually women, who work together to save money and loan amongst the group	Intimate understanding of household needs, social pressures increase pay-back rates, improves education and access to banking for the poorest	Detailed guidelines for success including group size and make-up require big time commitment and strong community support	These groups can become strong advocates for improved sanitation services and can help facilitate loan disbursal and payment collection in coordination with MFI partners

Investment Methods

Traditional grant-based approaches to implementing development projects have often been met with limited success due to low end-user buy-in, short-term outlooks, limited knowledge transfer for upkeep and maintenance, and a one-size-fits-all approach to product and service selection. NGOs, governments and other agencies have since tested numerous financing mechanisms to spur private enterprise engagement in development projects to foster demand-driven service implementation. The basic theory is that if an end-user buys a product or service, that user will be more invested in continually using and maintaining it. At the same time, entrepreneurs will also be incentivized to provide continuously improving products and services to meet customer demands and stay competitive with other companies.

To spur this market-based approach to development, agencies have numerous financing mechanisms at their disposal. For sanitation in particular, microfinance will be a key component of any market-based project, as end-users will be asked to pay for upgraded sanitation services to replace cost-free open defecation. Social investment, a strategy by which investors seek social and/or environmental impacts in addition to financial returns, will also play an important role in creating access to capital for sanitation entrepreneurs and end-users. At the same time, traditional investors, most notably large banks and other mainstream financial institutions have typically avoided participating in development projects due to perceived risk. They will likely require extensive technical education, detailed accounting reports and solid collateral to even begin considering investing in this sector. The table below details an array of potential financing sources and methods for sanitation projects from both the entrepreneur and end-user perspective.

Investment Methods

Investment Type	*Description*	*Accountability*	*Sustainability*	*Risk Tolerance*	*Opportunities*	*Functionality*
Traditional Bank Loan	Basic loan approved by a manager based on collateral, credible business plan, credit history and track record of positive cash flow	**Strong** – Will require strict adherence to payment schedule and loan covenants, inflexible loan terms, usually no EDS included	**High** – Strong due diligence and high risk aversion (not withstanding the sub-prime lending debacle) ensure bank stability	**Low** – Lowest risk tolerance, will not lend to projects without clear means of repayment and high profitability expectations	Pilot a group lending project, educate banks on sanitation, connect established companies with banks	**Low** – Will likely not be interested in sanitation due to perceived risk and low return potential, though education and pilot programs might help
Microfinance	Grameen Bank-style microfinance institutions (MFIs) require borrowers, usually poor populations, to form savings & credit groups and borrow from pooled savings. For-profits do not, but often charge higher rates.	**Strong** – Peers keep each other honest, each group lends from its savings pool so there is personal incentive to repay loans.	**High** for non-profit models – Grameen Bank has been working for over 30 years. **Questionable** at for-profit MFIs – Sometimes exorbitant rates, people trapped in credit spirals	**Medium** – Non-profit MFIs have spent decades perfecting the model, though natural disasters, unrest, disease outbreaks, etc., can quickly hinder loan repayments	Partner with non-profit MFIs for sanitation-specific loans, educate lending groups on hygiene, pilot community-based sanitation projects	**High** – Microfinance will likely be a vital component to any sanitation project. Microfinance institutions, development banks and even some commercial banks offer small-scale loans, often to Self-Help Groups.
Commercial Investment	Loans or equity investments (partial ownership, often including voting rights) from non-bank capital sources	**Strong** – Will often take a hands-on approach to ensure investment pay-off, and will require strict covenants	**High** – Structured to maximize risk/reward balance	**Medium** – Will invest in riskier ventures with commensurate return expectations	Look for traditional investors who might be testing social investment. Partner on enterprise dev. services for entreps.	**Low** – Such investors will likely not be interested in high risk/low return expectations
Social Investment	Investors seeking social and/or environmental benefits in addition to financial returns will invest either directly or via established social investment vehicles	**Varies** – Based on each investor's social goals and risk tolerance. Some require strict 3BL reporting, while others are more willing to forego profit for impact	**Unknown** – This sector is still in its infancy, though signs point toward rapid expansion, which will bring increased scrutiny and challenges as well as potential for big impacts and innovation	**Varies** – Again, based on each investor's social and financial goals	Probably relevant in the post-pilot phase to scale successful projects. Can provide investment capital for more loans and equity	**Medium/High** – Some investors will likely be interested in sanitation projects. The challenge is finding them and structuring a deal with adequate impact and return expectations
Loan Guarantee	NGOs or government agencies may provide loan guarantees for entrepreneurs or end-users seeking access to credit, but lacking collateral or credit history	**Questionable** – This may create a conflict of interest where those receiving loans may be less personally invested in paying them back. However, this may be the only way certain populations get access to credit	**Questionable** – Conflicting interests may work against such guarantees unless all parties can ensure true buy-in on the part of the loan recipient. In addition, if guarantor goes away, projects may fail. Short-term focus.	**High** – Those guaranteeing loans are doing so because loan recipients would otherwise not be credit-worthy. These guarantees are by nature very high-risk.	May be useful in establishing credit markets for the poor where they currently do not exist, particularly if dealing with traditional banks or similar institutions	**Medium** – In lieu of group microfinance, this may help improve credit access for entrepreneurs and end-users in the short-term. Water.org uses guarantees in certain circumstances.
Donor-Advised Fund, Mission-Aligned Endowment, Program-Related Investment	Newer philanthropy and non-profit investment strategies that align mission goals with return generation. This includes investment in companies or funds that address social/enviro issues	**Varies** – *See Social Investment*	**Medium/High** – A focus on maintaining capital points toward sustainability, though the widespread use of these strategies is relatively new, so it remains to be seen	**Varies –** *See Social Investment*	As with Social Investment, these larger funders may make good partners in the scale-up phase when capital requirements are greater	**Medium** – *See Social Investment*
Other Mechanisms	First loss loan reserves, standby letters of credit, and foreign exchange mitigation instruments	**Questionable** – NGO will be accountable to lender, though end-user may feel less so to NGO	**Questionable** –Unclear as to how, once NGOs leaves, programs continue w/out these services	**High** – *See loan guarantees*	Innovative and flexible strategies for securing funding will be important	**Medium** – *See Loan Guarantees*

Household Loans

Those without access to improved sanitation often lack adequate cash on hand to fund new products or services; yet that should not necessarily preclude them from engaging in the private market. With appropriately structured financing, even the poorest can access upgraded sanitation services. However, loans to individual households can be extremely difficult to source, execute and track. Rates of return on individual loans are generally not attractive to traditional banks that must spend time and money on due diligence, paperwork and payment collection. In addition, lack of credit history and collateral make lending to individuals challenging. Many pilot projects have been attempted, but few if any appear to have gone to scale without the use of group lending programs in conjunction with a local microfinance institution or commercial bank.

To avoid these issues, Self-Help Groups have become an important factor in successful microfinance projects. Villagers form groups based on similar experiences with poverty, living conditions, livelihood, and/or community in order to develop solidarity, exchange knowledge, and ultimately create access to microfinance. Groups create savings pools that can eventually be used for access to traditional banking services including lending within the group. This allows people with differing literacy levels, access to resources and financial competency to come together with a common purpose. Social pressures among group members also act as a strong incentive to repay loans, with groups often reporting few if any defaults.

The Reserve Bank of India, in a region at the forefront of microfinance-led development, has issued guidelines permitting all commercial and regional banks in India to open accounts for registered and unregistered self-help groups. Each group opens a savings account, and in time has access to lending facilities. Loan disbursements and amounts are determined within the group. The guidelines stipulate that no collateral shall be taken from self-help groups seeking loans due to the moral pressures for repayment associated with group lending combined with the already established savings from which loans are issued. This framework is a model for the industry and sets useful guidelines when engaging MFIs in any country seeking to increase access to improved sanitation services.

Some regional banks also have microloan programs for their banking clients. See the table below for details on various microfinance programs for entrepreneurs and end-users.

Sample Microfinance Programs

Name	*Country*	*Type*	*Description*	*Terms & Features*
Equity Bank	Uganda	Development Loan	"Designed to finance construction and improvements to a structure that serves as the principal residence of the client or for other development projects not limited to the household and furnishings" http://www.equitybank.co.ug/loans.php?subcat=135	•Loan amount to finance up to 70% of the project •Loan period of up to 36 months, monthly & quarterly repayment period •No insurance fees, loan insured against death •Formal collateral (Land titles, log books, Fixed Deposit certificates •For commercial users, business must be in existence for at least 6 months •Loan processing fee of 2 – 3%, Interest rate 24% p.a
Equity Bank	Uganda	Group Loan	"Designed for small and micro businesses that do not have formal collateral to access individual loans" http://www.equitybank.co.ug/loans.php?subcat=128	•Loan amount ranges from Ushs 100,000 to Ushs 5,000,000 •Repayment over 3-12 months, weekly, bi-weekly or monthly payment periods •No grace periods, quick loan processing •No formal collateral required •10 – 20 members from a group •Group savings account 10% of the loan amt is initial deposit in the account
Centenary Bank	Uganda	Home Improvement Loan	Short-term loan with both regular and irregular repayments targeted at home owners with regular income earnings for the purpose of financing home improvement either through construction/ renovation residential/commercial houses, erecting of perimeter wall/fence, installation of power and energy systems, kitchenettes, water supply and sanitation systems and building of latrines. www.centenarybank.co.ug/	*Main Features:* •Interest charged on declining balance •Loan amount: UShs. 100,000 – 30m •Regular and flexible loan repayment plans up to 36 months *Basic Requirements:* •Saving or Current account with the bank •Applicant must have a home to improve and security for the loan. •Applicant must be resident in the branch-designated area of operation. •Applicant must possess good source of income for repaying the loan. •Application fee of UShs. 5,000, commitment fee of 2% of loan amount.
Centenary Bank	Uganda	Commercial/SME/ Corporate Loan	Start at UShs 15.5m (roughly $5,800 USD), which will probably be out of reach for many smaller/informal entrepreneurs. Loans extended to SME's and Corporates engaged in profitable business activities in a variety of sectors for use in financing working capital, acquisition of business assets and infrastructural development. www.centenarybank.co.ug/	*Main Features:* •Interest charged on reducing balance. •Minimum loan amount UShs 15.5million •Maximum loan amount of up to UShs. 1.5billion. •Loan period of up to a maximum of 5years. •Secured by collateral up to 100% cover of the sale value. •All sectors of the economy are financed. •Grace periods are applicable on a case-by-case basis. *Basic Requirements:* •Centenary Bank Savings or Current account, Audited Financial Statements, security for the loan, business registration documents, copies of trading licenses, business plan with a cash flow statement, inspection of business and security
PostBank	Uganda	Business Loan	MFI offering banking services for the mass market. Note: PostBank also offers a Solar Loan program, which may be useful in guiding the development of a sanitation loan product – http://www.postbank.co.ug/solar.html	*Main Features* •Interest charged on reducing balance •Loan amount 500,000 – 1b •Lending arrangement: 2%, monitoring fee: 2%, application fee: 20,000 •Flexble repayment period of 6-36 months *Basic Requirements* •Must be PostBank Account Holder •Non-customers can provide last 6 months bank statements from current bankers or audited accounts •Business operational for 6+ mths, registration docs, 2 guarantors

Sanitation Finance: Access to Capital for Entrepreneurs and End-Users

Name	*Country*	*Type*	*Description*	*Terms & Features*
Water.org	Various	WaterCredit	WaterCredit is the first program of its kind that puts microfinance tools to work in the water and sanitation (watsan) sector. By connecting microfinance institutions (MFIs) to communities in developing countries in need of clean water and toilets, small loans are then made to individuals and households. As loans are repaid, they can be redeployed to others in need of safe water, reducing the need for subsidies, which can help those who need them most. http://water.org/solutions/watercredit/	•WaterCredit loans made: More than 51,300 •People benefited directly from WaterCredit: More than 316,000 •WaterCredit partners: 23 •WaterCredit countries: 4 – India, Bangladesh, Kenya and Uganda •Average WaterCredit loan size: $120 •Women WaterCredit clients: More than 90% •WaterCredit global repayment rate (since 2007): 97% •Catalytic philanthropic invstmt. in WaterCredit by Water.org: $2.9m •Amount of additional capital leveraged: More than $5.5 million •WaterCredit loans made: $6.1 million
Opportunity International Bank of Malawi	Malawi	Business Owner Loan	A micro credit designed for experienced business owners who borrow as individuals. http://www.oibm.mw/	•Loan size of up to K 600,000 (~$3,600 USD) •To financing working capital or fixed asset acquisition •Repayment period of 3 to12 months with 1 month grace period for certain fixed assets it can go up to 24 months •Flexible terms & manageable loan size & flexible security requirements
Opportunity International Bank of Malawi	Malawi	Group Business Loan	A micro loan product designed for small businesses that are organized into groups. http://www.oibm.mw/	•Group size of 7-10 people in urban areas and 10-15 in rural areas, preferably resident in the same area and doing relatively similar businesses. •Loan size of up to K30,000 (~$180) per person •Purpose; working capital or business asset acquisition •Repayment Period is 4 – 8 months •Transformational training provided •Group security and flexible, easy repayment schedule
Opportunity International Bank of Malawi	Malawi	Household Sanitation Loans	Opportunity International has partnered with NGO Hygiene Village Project to provide micro-loans to families in Blantyre, Malawi. http://www.opportunity.org/blog/2010/07/page/2/	"At least 7 hygiene Trust Groups, each comprised of about 60 families, have now taken out a loan from Opportunity for a latrine. Forty-six latrines have already been constructed. An installed latrine costs about $175 and the loan is repaid monthly over the course of a year."
Fundacion Sodis	Bolivia	Household Sanitation Microfinance	A pilot project to test microfinance implementation for access to watsan services in rural Bolivia. FS worked with a local MFI to devise a favorable loan structure, then used donor funds for overall loan guarantee incentives for the MFI. http://sitio.fundacionsodis.org/	•MFI credit to suburban families at attractive conditions •Int'l donor set up security fund for MFI as a fallback and source for attractive loan conditions (fixed term inv.) •A technical advisor organization •Local micro-entrepreneurs for service delivery
The Vietnam Bank for Social Policies	Vietnam	Special Water & Sanitation Services Loan	Notable for its scale (500,000 borrowers), this program, in coordination with the Vietnam Women's Union (VWU), which has done a great deal of education to create demand (via an initial World Bank revolving fund for sanitation), has seen high demand.	Loans are for <5 years, up to US$460, with an interest rate of 7.8%. Borrowers must join a savings and credit group, and no other collateral is required. VWU coordinates education, group formation and interest collection, and is paid a commission for these services. *See WSP's Case Study on Sustainability of Rural Sanitation Marketing in Vietnam for more information*
Caja Municipal de Ahorro y Credito del Cusco	Peru	Creating Sanitation Markets Initiative	WSP Pilot Program in Cusco, Cajamarca, Ancash & Callao regions targeting low- and middle-income families without access to formal credit. http://www.sswm.info/library/4024	Loans averaged $1,010 in urban areas with $100 monthly payment and $450 in rural areas with a $45 monthly payment. Clients must develop income-generating activity, demonstrate ownership of property where facility will be built, and have good community references. Terms: 6-18 months at 2.4%/month interest, and the bank finances 100% of project. Repayment rates are reported to be very good.

Peer NGO Strategies for Investing in Entrepreneurs

There are numerous NGOs implementing innovative investment mechanisms to reach mission objectives in lieu of charity-based methods. Groups like E+Co, Acumen Fund, Root Capital and Agora Partnerships (among several others) apply a combination of business development services, capacity building, education, and loans/equity investments in entrepreneurs to maximize impact.

These NGOs seek to address the issue of funding for the "missing middle", enterprises whose capital needs fall between microfinance and traditional investment finance (this might be somewhere in the range of US$10,000 to US$250,000, depending on the country). Both microfinance and traditional investment finance now have well-established networks of players, but SMEs are often unable to secure adequate financing from either: they're too big for microfinance and too small, often lacking in proper collateral, and may be considered too "informal" for investment bankers. Yet these enterprises can make up a substantial portion of a given country's economy.

NGOs are uniquely equipped to work as a sort of hybrid between mission-based non-profit and traditional investor by providing *patient capital* for projects that often generate lower returns and have higher due diligence and monitoring requirements than traditional investments. NGOs can provide this missing middle funding through loans, generally with at- or below-market rates. As importantly, though, they can offer enterprise development services (EDS) in the form of finance, operations and marketing training along with strategy consulting to lead businesses toward profitability (and the ability to eventually seek traditional forms of investment) and improved triple-bottom line impacts. This "incubation" process, also referred to as "capacity building", ultimately strengthens the entrepreneur's ability to access traditional capital markets. Where those markets do not exist or are entirely out of reach for sanitation entrepreneurs, the NGO can act as a lender or facilitate borrowing through other institutions.

The *potential for scale* is an important consideration for these investors to ensure the business has the ability to repay loans and to maximize social/environmental impacts. Often, these NGOs establish relationships with entrepreneurs that lead to further investment and even greater impacts. As an example, E+Co, which invests in clean energy projects, has been able to create for-profit vehicles for investment in proven businesses in Latin America and Asia, many of who thrived through initial capital and EDS provided by E+Co early on. These businesses now seek larger investments a non-profit model would not be able to support, but which would be attractive to other impact investors. Some of these companies, though well established, still face challenges in securing financing from traditional banks. The for-profit investment funds allow both E+Co and its portfolio companies to continue to capitalize on already-established relationships while attracting funding from new investors with different risk/reward expectations. E+Co can then use any portfolio management fees it collects from investors to support operations on the non-profit side.

Loan Structures

The NGO must assess the current lending climate where it is looking to invest to determine average lending rates and accessibility levels for the entrepreneurs it is targeting. It is often the case that entrepreneurs, particularly in industries addressing the needs of poor populations, either do not have access to financing or only have loan options with prohibitive terms. This does not necessarily reflect the potential for the venture to make money, but may speak more to collateral issues, the lender's lack of industry understanding, or the entrepreneur's informal status.

NGO lenders must balance market conditions as well as entrepreneur needs and ability to repay along with its own capital requirements in determining interest rates, a process that will vary between investments and across regions. In addition, some entrepreneurs will need basic short-term working capital funds while others might require long-term investment. The NGO structure can allow for flexibility and innovation in structuring deals that meet the unique needs of sanitation entrepreneurs.

Loan Repayment

NGOs by nature are more willing to work with entrepreneurs on loan repayment challenges than traditional banks might. These entrepreneurs are decidedly more vulnerable to adverse market conditions than more established firms for a number of reasons including:

- Limited influence over supply chain (bigger players have more power)
- A lower-income consumer base that is also highly vulnerable to market shocks (extreme weather, economic uncertainty, food/fuel scarcity, etc.)
- The entrepreneur's own vulnerability to market shocks
- Inexperience with debt commitments, currency exchange fluctuations and challenges associated with often-informal accounts payable and receivable.

As a result, loan repayment challenges can occur where the lender will have to renegotiate loan terms.

Lenders need to ensure that there is a history of governmental and cultural support loan repayments and collateral collection. NGOs have been confronted with lax law enforcement and cultural inexperience with lending, which has led to write-offs and discontinuation of services in those countries. However, loans from registered NGOs carry the same legal weight as traditional bank loans, so it best to ensure that a country's overall lending environment is sound when determining whether to lend there.

As it is in the NGO's interest to maximize positive social/environmental outcomes in addition to financial returns, they will be more willing to demonstrate flexibility than traditional financiers would. The NGO can even choose to make small-scale, higher-risk investments for projects with strong impact potential. These experimental investments, often quickly deployed, can provide valuable lessons learned and may ultimately help get viable businesses off the ground that would simply not have a chance otherwise. If they fail, loan losses are relatively small, but if they succeed, both parties stand to benefit.

Pipeline

A robust project pipeline helps to ensure sustainable operations at each location. It is important to have local staff who understand the region's language, culture, customs and methods of doing business. It also improves the NGO's impact if they employ qualified locals over funding international staff. For example, E+Co has an office in Ghana, and its local investment officers must develop a continuous flow of potential deals that will increase impact, diversify the portfolio and ensure the head office continues to fund operations there.

Staff source projects in a number of ways. Most urban areas that have an established or developing entrepreneurial community will have seminars, fairs and other gatherings for those working in or looking to begin work in a specific sector. NGOs and international development organizations also often host training sessions and other events for prospective entrepreneurs. These sessions often did not lead to much for participants because of lack of follow-up or opportunities for further development. That's where NGOs can step in. Additionally, as NGOs become established in communities, intrepid entrepreneurs start to seek out their services, which can also improve deal flow.

After establishing initial contact, the NGO will assess the entrepreneur through interviews and on-site visits. Staff can also work with the entrepreneur to develop or strengthen a business plan and a request for funding. The due diligence and development process will take up to a year or more, which can actually help investment officers determine the entrepreneurs who are really committed to their projects – they will need to do a lot of market research, budgeting and planning to get to the investment stage.

Investment

E+Co makes clean energy investments in developing countries. This NGO provides enterprise development services coupled with loan and equity funding to small- and medium-sized businesses in Africa, Asia, and Latin America. Similarly, Acumen Fund works with entrepreneurs who are tackling poverty-related issues with market-based solutions. It also provides loan and equity investments in lieu of grants to maximize donor dollar impacts.

E+Co's method for putting together a deal is as follows:

- Local investment officer works with entrepreneur to establish a draft term sheet
- E+Co staff at US office work with the investment officer to revise the deal
- The deal is submitted to the volunteer E+Co investment committee, which gathers on a quarterly basis to select investments that meet overall portfolio requirements and strategy
- Approved deals are brought back to the entrepreneurs for final approval
- Disbursements generally happen within a few months

Acumen Fund's investment ideology:

- Typical investment: $300,000 - $2,500,000 (higher range than similar NGOs)
- Primarily debt

- Guarantees provided to achieve access to local sources of capital
- "Lab investments" – smaller-scale, higher risk loans where funds can be deployed quickly and lessons learned in the short-term
- Criteria: Social Impact, Financial Sustainability, and Potential for Scale

Deal Example

One NGO worked with an Africa-based improved cookstove manufacturer/seller, whose founders participated in a cookstove-manufacturing seminar offered by Enterprise Works Worldwide. Several dozen people participated, two of whom eventually connected with the NGO's local staff. They worked together to develop a business plan to employ the informal sector in manufacturing and sales, allowing the company to hire most of its potential competitors and sell widely. The NGO then offered the company an initial loan of US$70,000 at 6.5% annual interest to be paid in 4.5 years. Additional terms included an annual enterprise development services (EDS) fee of $1,298 and a one-off "kicker" of $9,000 payable on the last repayment date. Collateral included fixed and current assets of the company and shareholders and a life insurance policy from shareholders assigned to the NGO.

The company ultimately exceeded first-year sales targets by 58% and continued to grow rapidly. It engaged with the NGO for two additional loans of $100,000 each, the second of which carried a 10% annual interest rate and a term of 4 years (data unavailable for first $100k loan). These loans were justified because the company faced supply constraints as demand soared, though it had achieved profitability. Company fixed and current assets had grown enough to warrant additional investment and mission impacts were huge – the company would be able to move from selling tens of thousands to hundreds of thousands of stoves annually, with associated carbon reductions and health improvements.

Tracking Social and Environmental Impacts

On top of already established mission-specific benchmarks and goals at the NGO level, many investors in development projects will require tracking of specific social and/or environmental impacts in addition to financial returns. Measuring impacts and comparing them between different projects and organizations has proven challenging in the past due to differing methodologies and metrics. However, the Global Impact Investing Network (GIIN) has created the *Impact Reporting & Investment Standards* (IRIS) a standardized system by which investors can evaluate project performance.

Reporting requires partnership between facilitators and SMEs. The facilitator must convince the entrepreneur of the benefits of adhering to guidelines and tracking performance while also assisting in and verifying impact assessments. Precise and streamlined reporting requirements can encourage entrepreneurs to make operational improvements, but facilitators must ensure that the reporting burden is manageable and relevant to both parties. The best approach is to develop a reporting plan in coordination with the entrepreneur during the investment process, and perhaps even including it in the investment agreement itself. This plan will outline what data needs to be tracked, benchmarks and goals, and how frequently the entrepreneur must submit reports.

For best results, the NGO must understand specifically what it can feasibly track as an institution, and then which of those metrics apply to each investment to make aggregating impacts easier for reporting purposes. The three main functions of impact assessment are:

- Mission: Is the project meeting mission objectives?
- Donor/investor: Is the project meeting additional requirements as stipulated by outside donors/investors?
- Story: Are impacts tracked in a way that enhances the story the NGO is trying to tell for marketing, attracting additional donors/investors, annual reporting and other communications?

Some NGOs employ dedicated monitoring and evaluation (M+E) officers who work on- and off-site with entrepreneurs to train them on how to collect data and ensure all relevant impacts are accounted for. In some cases, carbon credits may be involved, which further complicates reporting and may require additional NGO staff for verification. Finally, additional M+E may be necessary to ensure, for example, that loans are used as agreed upon, that entrepreneurs are addressing any previously disclosed issues they may have (or new ones that have arisen), and that each investment is meeting the organization's triple bottom line objectives.

Metrics of particular interest in the sanitation space include:

- Wastewater Treatment quantities
- Waste Disposed: Composted quantities
- Wastewater Treatment Compliance with local regulations
- Water Management methods implemented

In addition, there are Social Responsibility metrics for the SME itself including data on hiring practices, company policies, wages and benefits. These metrics can apply to nearly any business seeking to track social impacts.

An interactive list with descriptions of all metrics is available at:
http://iris.thegiin.org/iris-standards

Potential Pitfalls

It should be noted that development agencies and NGOs may be less willing to discuss what *has not* worked than to discuss success. As a result, foreseeing potential pitfalls can be challenging, but there are some things NGOs should consider when looking to foster private sector engagement in the sanitation industry.

- *Lending culture and legal issues* – some regions have differing histories with lending in general. It is important, for example, to understand whether it is feasible to collect collateral for loans in arrears if need be, or if it is very difficult to do so. Some countries may have solid laws in place but lax enforcement. Bribes and other bureaucratic issues are also worth watching out for.

- *Market distortion* – if a lending market currently exists where an NGO is looking to start a project, it is important to first explore means by which it can utilize that market. Can it make a deal with an established lender to offer a suitable loan? Or are area lenders simply not interested in development projects? The organization must be aware of what affect any subsidies or guarantees it hopes to offer will have on the overall market. If it appears to distort an otherwise functioning market, it may make sense to reconsider. If however those seeking improved sanitation products and services would otherwise not have access to markets, judiciously applied incentives may work. Keep in mind, though, what will happen to the market once those incentives go away. Consider strategies for long-term sustainability when developing incentive-based projects.
- *Exit strategy* – When making equity investments, it is important to consider how the organization will ultimately redeem its investment. While it is typical in the US for companies to issue stock on publicly traded markets, this will likely not be the case for sanitation entrepreneurs. Before making an equity investment in an organization, consider if there are other potential investors for this company that might eventually be interested in buying the organization's shares. Another strategy might be to establish an agreement with the entrepreneur to buy back the organization's shares at a set date if certain conditions are met. Note that exit strategy is not a concern for loans as payback terms are strictly laid out in any loan agreement.
- *User willingness to pay* – End-users may not see value in improved sanitation, thus hindering a project's market potential. Hygiene education plays an important role in creating a willingness to pay for such services. Governments can make good partners with NGOs seeking to spread information about the benefits of improved sanitation. Another important consideration is that even at the base of the pyramid, a "keeping up with the Jones" mentality does exist. When some residents, perhaps those in higher income brackets, build new latrines, neighbors often then seek out such facilities.
- *Cultural issues around paying for public goods* – Water and sanitation are often considered "public goods" (non-competitive, non-excludable) that might otherwise be considered free. Will the area support a market-based solution for sanitation services when residents are accustomed to free use of unimproved services? Some cultures deem public goods the domain of government, and are hesitant to allow market forces to dictate their deployment. In such cases, it may make sense to engage public officials in fostering private markets via piloting quasi-market-based programs with, for example, periodically decreasing subsidies that can pave the way for more sustainable solutions.
- *Choice* – Understanding client needs and desires is paramount. While users may be ready and willing to pay for improved sanitation products and services, actual uptake still hinges on providing the right choices. There is rarely a one-size-fits-all product for everyone. Engage with the target market to ensure they are given access to the products and services that suit their needs and desires.

Resource List

Assessing Microfinance for Water & Sanitation: Exploring Opportunities for Sustainable Scale-Up
http://www.gatesfoundation.org/learning/Documents/assessing-microfinance-wsh-2008.pdf

Potential demand estimates for watsan microfinance across Asia and Africa amount to over $12b in total loans over the next decade. (p. 4) Many projects hoping to address that demand are in the pilot stage, with few having reached scale.

- "The highest potential for making a clear business case is through individual retail loans for sanitation… followed by water supply loans through retail and SME-type loans for small water investments." (p. 7)
- Lessons from experiences using microfinance for watsan (p. 23-41)
  - Numerous case study examples
    - MFI-retail loans to households
    - Externally-financed loans
    - Use of microfinance for upgrading urban shared facilities
    - Measures to support scale-up
- "Available experience with sanitation-related loans suggests that these loans have generally been linked to a wider program of demand promotion, in which considerable attention is paid to mobilization activities. When MFIs follow a community-based model with group lending (as in Bangladesh or the SHGs in India), this may serve the same purpose." (p. 38)
- Key lessons for SME-type loans (p. 39-40)
  - "Credible promoter" with local presence
  - Build capacity at MFI
  - Partial subsidies or guarantees to ensure affordability
  - Conducive policy framework
  - Business development services
- Key lessons for microfinance for urban services upgrading (p. 40-41)
  - Use of microfinance with public funds is critical
  - Land tenure is a critical issue
  - Evolving feasible programs for city-wide scale-up

Demand Assessment and Willingness to Pay Survey
http://www.worldbank.org/urban/solid_wm/erm/Annexes/US%20Sizes/New%20Annex%204D.3.pdf

Detailed description of the value of end-user willingness to pay (WTP) data, methodology for collecting such data, complete sample questionnaire and instructions for conducting a WTP survey. This particular survey specifically addresses private sector participation in solid waste management.

E+Co's Monitoring and Evaluation Program
http://eandco.net/impact/monitoring-and-evaluations-program/

E+Co has developed an industry-leading M&E Program for its investments, which combines home office and on-site staff analysis along with rigorous reporting from each entrepreneur. This page lists all triple-bottom line indicators it tracks, and how it measures both quantitative and qualitative data.

Enabling and Scaling Market-Based Solutions to Sanitation
http://www.sanitationfinance.org/sites/www.sanitationfinance.org/files/Sanitation%20Proposal%20to%20WSFF%2020101019%20Exec%20Summ%20Web_1.pdf - *Note: WFP has an electronic copy of the full report*

Preliminary report on McKinsey research study, with follow-up report to be released by early 2012 including methodology and challenges associated with developing and scaling sanitation solutions, an emphasis on fostering public/private/social sector partnerships, economics surrounding different solutions and case studies.

Interesting takeaways:

- "Serving different parts of the value chain: In certain cases, there may be financial leverage opportunities to increase the attractiveness of interventions. Financial services should therefore move beyond the basic provision of debt finance for individuals and organizations toward strategic provision of funds to reduce supply-side costs by increasing scale (e.g., of factories, of masons) and by fostering innovation." (p. 7)

- "Each dollar invested in improving access to water and sanitation in developing countries is estimated to give an average return of US$9." (p. 7)
- "…some interventions may only become financially attractive with a certain scale of demand, which grant-driven demand creation interventions may be well suited to establish." (p. 10)

Financing the Informal Entrepreneur: Recognizing Business Opportunities in Sanitation
http://www.ecosan.at/ssp/issue-05-sanitation-as-a-business/article-4.pdf/view

This report describes challenges informal entrepreneurs face in engaging with the formal sector, and means by which they can become engaged with local financing opportunities, particularly in Kenya. It outlines the stories of 3 entrepreneurs in Kenya working with WASTE in coordination with K-Rep Bank. The report finds that bankers want to see 3 things when considering loans to entrepreneurs: *registration* (MFIs are less likely to require it), *cash flow* and *collateral*.

Guidelines for User Fees and Cost Recovery For Rural Water and Sanitation
http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/brochure%20cost%20recouvry%20rural%203_11_2010%20.pdf

African Development Fund report addressing the financial considerations in establishing sustainable water, sanitation and irrigation projects to meet Millennium Development Goals, particularly for researching and developing appropriate fee structures for watsan projects for low-income populations.

- Main steps:
    - 1. Determining the economic, policy and institutional context in the country with respect to water and sanitation services
    - 2. Setting cost recovery and service objectives
    - 3. Undertaking investment planning, costing and appraisal, to determine costs to be recovered and overall revenue requirements
    - 4. Determining the basis for charging user fees
    - 5. Implementation of user fees and cost recovery system
        - Includes when to collect, who collects and where to keep the money and non-payment challenges

A Handbook on Forming Self-Help Groups
http://www.nabard.org/pdf/publications/manuals/formingshgs.pdf

This handbook lays out step-by-step instructions for forming self-help groups, developing savings pools, accessing banking services and rating progress. Also included are sample applications and loan documents for group members.

Impact Investments: An Emerging Asset Class
http://www.jpmorgan.com/cm/BlobServer/impact_investments_nov2010.pdf?blobkey=id&blobwhere=1158611333228&blobheader=application%2Fpdf&blobcol=urldata&blobtable=MungoBlobs

Describes the impact investment market landscape, varying financial return expectations and BoP market opportunities. Return expectations vary dramatically by investor and most deals are for $1m or less. Impact measurement systems are "currently overwhelmingly proprietary", with roughly 85% of investors using their own metrics. Currency risk for microfinance investments is generally borne by the investor.

Sanitation Financing Models for the Urban Poor
http://www.susana.org/docs_ccbk/susana_download/2-1374-25topsanitationfinancingmodelsfortheurbanpoor2011.pdf

A detailed overview of different sanitation solutions and how they are currently financed along with real-world examples. The paper addresses the applicability, sustainability, simplicity, scalability, pro-poor and equity for each solution as it relates to the urban poor. A key takeaway is to ensure solutions specifically target the poorest and address concerns about equality (gender, caste, etc.). Includes descriptions of projects in Malawi, Uganda and India. Also looks at both the end-user and entrepreneur sides.

Self-Help Groups: A Keystone of Microfinance in India
http://www.aptsource.in/admin/resources/1273818040_SHGs-keystone-paper.pdf

A history of microfinance and the self-help group movement in India, as well as recent developments that have driven the market's expansion. Also describes how linking self-help groups to commercial banks can improve savings and lending conditions as well as civic engagement and personal livelihoods, but stresses the need for improved internal controls and governance.

State of Microfinance in Uganda: 2008: Analyzing AMFIU Member MFIs
http://www.amfiu.org.ug/images/docs/carol/wp10.pdf

This report has practical information for organizations seeking MFI partnerships in Uganda. It assesses the 78 institutions offering microfinance services in Uganda, including research on organization types, numbers of people served, website listings, savings and loan portfolio sizes, product types and end-user demographics. Only 9 MFIs listed currently offer home improvement loans and none are listed as offering sanitation-specific loans.

Water Supply and Sanitation in Rwanda: Turning Finance into Services for 2015 and Beyond
http://www.wsp.org/wsp/sites/wsp.org/files/publications/CSO-rwanda.pdf

- The government is targeting and sanitation expenditures of US$38m, and anticipates users will bear ~70% of costs in both rural and urban areas, with an emphasis on on-site sanitation. It currently foresees a $9m deficit per year.
    - Rural per capita spending = $43
    - Urban per capital spending = $74
- Current coverage and expenditure rates for rural and urban water and sanitation services
- Priority actions include *decentralization* (local capacity), *regulation* (improve rural presence of utility regulation), *donor coordination*, *rural operators* (raise level of professionalism)
- Sees greatest need for finance in urban projects, with virtually no investment from NGOs
- For rural sanitation: "Markets for rural sanitation suffer from a weak supply chain with proposed 'improved' technologies still too expensive for most households. Performance contracts for districts to improve living standards at household level may help in this regard, but experienced engineers and trained technicians are rare at district level, leading to variable implementation quality. The subsector has too long been dominated by donors' pilot programs (Sanplat in the late 1980s, Ventilated Improved Pit (VIP) latrines in the 1990s, ECOSAN today), which has done little to promote private sector involvement."
- For urban sanitation, "in the near term, action plans addressing the subsector target are likely to focus on adapted on-site sanitation, as up to now no significant investment program is anticipated for developing public sewerage systems, despite Vision 2020 aiming at universal access by the end of the next decade." This implies a need for sanitation entrepreneurs as the government foresees a decentralized system.

WaterCredit Executive Summary
http://static.water.org/pdfs/WaterCredit%20Executive%20Summary%20(June%202011)%20FINAL.pdf

- Descriptions of the various roles an NGO can have in deploying private sector watsan solutions.
    - Capacity building – market research, community mobilization, education, portfolio development
    - Facilitation via partnerships, strategic advice, and loan product development
    - Credit enhancements – guarantees and other instruments
    - Revolving loan fund for other NGOs and MFIs to establish their own watsan loan facilities
- A complete description of water.org's WaterCredit program, which aims to foster demand-driven, market-based water and sanitation solutions by linking end-users with microfinance opportunities and providing MFIs with strategic expertise in creating watsan loan programs.
- Includes loan information, partnership methodology, financial mechanisms including "smart subsidies" (capacity-building grants), credit enhancements and revolving loan funds, education and advisory services as well as future plans.

Glossary of Terms

Corporate Social Responsibility (CSR) – A company's commitment to creating positive social and/or environmental outcomes in addition to traditional financial returns. Many companies are becoming increasingly aware of the non-financial impacts they have, and are seeking to track, improve and report on those impacts.

Deal Flow – The continuous stream of potential investments an investment officer sources for a particular portfolio. This includes loans and equity investments with specific terms that managers can use to decide whether to actually invest or not.

Equity Investment – An exchange of funds for partial ownership of an enterprise. There is no guarantee of repayment as there would be with a loan, but that is offset by the potential for much greater returns in the long run.

Informal Enterprise – Many small-scale entrepreneurs in developing countries are not recognized by their local or national governments, and thus may not pay taxes nor receive protections or support. This can limit an entrepreneur's ability to raise capital or conduct business in certain localities.

Loan Investment – An exchange of funds for a guaranteed payback over a set period of time with predetermined interest payments. The interest rate is determined based on the perceived risk of the investment. In the event of bankruptcy, lenders receive liquidation proceeds before equity investors.

Microenterprise – Even smaller than SMEs, microenterprises have few if any employees other than the entrepreneur, and may be considered informal.

Microfinance Institution (MFI) – A non-profit or for-profit entity that provides small loans to individuals and groups. This is often the first access point for poor populations who are not served by traditional banks. Most MFIs require borrowers to first establish savings accounts, often within a Self-Help Group structure.

Missing Middle – In many countries there is a group of enterprises that are too big for microfinance services and yet too small or innovative to seek capital from traditional financiers. This group has been referred to as the "missing middle" by numerous NGOs seeking to close that gap.

Pipeline – All of the companies, projects and entrepreneurs an investment officer has researched for potential investment. Similar to "deal flow", though of broader scope and generally not inclusive of investment-ready deals.

Small and Medium Enterprises (SMEs) – Companies with limited numbers of employees (less than a dozen up to a few hundred) or enterprise values. Exact figures for what defines a small or medium enterprise vary by country. SMEs can often drive innovation and increase competition in many sectors, though may be more vulnerable to outside market forces than larger firms.

Enterprise Development Services (EDS) – Start-up entrepreneurs often lack some formal business skills such as accounting processes, business plan development and marketing strategy that hinder them from accessing bank financing and maximizing project impacts. EDS provided by NGOs or other business professionals can help address those issues.

Triple Bottom Line (3BL) – A company's non-financial returns including social and environmental impacts.